CABOT CORPORATION P. O. BOX 1101, PAMPA, TEXAS 79065

CABLE ADDRESS "CABLAK" PAMPA
PHONE 669 - 2581 (AREA CODE 806)

September 6, 1974

Mr. William H. Busch, Permit Services
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

Subject: NPDES Application No: Il 072 OYE 2 000712
Illinois EPA Log NPDES 55-72
Joint Public Notice No: 411 0241A
Cabot Corporation, Tuscola, Illinois

Dear Mr. Busch:

We would like to make application to the Illinois EPA for the exemption under Rule 404 (f) (ii) of the Illinois Pollution Control Board Rules and Regulations, Chapter 3. We feel that we qualify for the exemption because:

1. The effluent does not, alone or in combination with other sources, cause a violation of any applicable water quality standard.

2. The effluent does not, alone or in combination with other sources, cause dissolved oxygen in the waters of the State to fall below 6.0 mg/l during at least 16 hours of any 24-hour period, or below 5.0 mg/l at any time.

3. Our average discharge, at present, is 14 mg/l BOD_5 and 9 mg/l suspended solids and we are operating under Illinois EPA Permit Number 1973-EA-506-OP. We have applied for and have received Illinois EPA Permit Number 1974-FA-1062 to construct a new aerobic treatment plant. When this plant is completed, later this fall, its effluent will not exceed 10 mg/l BOD_5 or 12 mg/l of suspended solids. (It will actually meet 4 mg/l BOD_5 and 5 mg/l suspended solids, as indicated under Section II, 4a of the permit application.)

4. The above program is our program for achieving compliance since the outfall from the treatment plant will be diluted further by water from the Nash pump seals, which themselves exhibit no BOD_5 and very little suspended solids.

5. We feel that by issuing the above permit and approving the construction schedule, your agency has agreed with us that this will be sufficient to place us in BOD_5 compliance, and we are already in compliance with regard to pH, suspended solids and dissolved solids.

We respectfully request that you grant this exemption and notify, in writing, the Regional Administrator of the USEPA so that the applicable final effluent limitations on our 001 outfall shall be:

	Daily Average	Daily Maximum
Suspended Solids	12 mg/l	30 mg/l
BOD_5	10 mg/l	25 mg/l.

We thank you for your continued cooperation.

Yours very truly,

CABOT CORPORATION

D. J. Robinson, Ph. D
Corporate Environmental Control

DJR/pc
cc: Mrs. Carolyn Cates
Region V, Permit Branch
U.S. Environmental Protection Agency
1 North Wacker Drive
Chicago, Illinois 60606

CBBeck/File: 13.107 - Pampa
RDSeikel - Pampa

CAB-O-SIL® DIVISION

CABOT CORPORATION P. O. BOX 188, TUSCOLA, ILLINOIS 61953

TELEPHONE AREA CODE 217
TUSCOLA 253-3370
TELEX TUSCOLA 910-663-2542

July 18, 1977

Dr. Rauf Piskin, Manager
Hydrogeology Unit
Technical Operations Section
Division of Land/Noise Pollution Control
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, IL 62706

Re: Permit #1975-EB-1316-OP
Your letter of July 12, 1977 to J. L. Hobbs

Dear Dr. Piskin:

In your letter of July 12, 1977, additional information were requested to complete our supplemental permit request concerning the disposal of increased quantities of waste from A. E. Staley Manufacturing Company. Following are the information requested.

1. Parameters characterizing the waste.

Staley Waste	Specific Gravity @ 60°F	Viscosity @ 78°F Centipoise	pH	Discharge Waste Temperature
Ethy 2025	1.058	4.0	7.04	Ambient
Eclipse N	1.031	2.9	4.75	Ambient
Staysize 140	1.019	3.0	7.31	Ambient
Staysize 111	1.028	3.3	6.24	Ambient

2. Compatibility Test

a. Precipitation

The question of precipitate formation was checked by two methods. One is to use 1:1 weight ratio mixture of Staley waste and our pond liquid, mixed and settled for 16 hours, to simulate our mixing tank and settling pond retention time in our plant. This was done at ambient (about 78°F) and 150°F temperature. The suspended solids were determined for both of the mixture and the supernatant after 16 hours settling.

	Total Suspended Solids (ppm)		
	(1) Ambient Temp.	(2) 150°F	Settled 16 hours Supernatant of 1:1 mixture of (1)
Ethy-2025	640	410	12
Eclipse-N	710	270	10
Staysize-140	990	260	5
Staysize-111	930	456	5
Pond Liquid	850	560	-

The pond acid sample used contained 850 ppm and 560 ppm of suspended solids at two temperatures. It can be seen that there was virtually no increase in suspended solids in the mixture comparing with the pond acid. In addition, the mixtures showed much better settling of the solids leaving a very clear supernatant. This is a definite advantage for the settling ponds to have better sedimendation of the solids.

The second method was to add pond liquid into the Staley waste at two temperatures while observing through a microscope at 80X magnification, no precipitation of solids was observed.

b. Gas Generation

Staley wastes were added to the pond liquid at two temperatures by drops and the mixing was observed through a microscope at 80X magnification. No gas generation was observed.

Also, the mixture (1:1) was placed in a bottle and capped. After shaking the bottle the cap was opened and no sign of gas release was noticed.

c. A sample of well bottom formation was used as a filter to determine the porosity characteristics when Staley wastes were passed through it. The filtration rate was compared with water. The waste mixture passed through the formation slightly faster than water (1 3/4 minutes for waste mixture and 2 minutes for water). This indicates that the waste is comparable with water in filtration rate.

3. Effects of the increased volume of the Staley waste on emergency storage.

We will reserve the right to refuse to receive any Staley waste shipments during abnormal situations. Such abnormal situations will include, but not be limited to:

a. Well maintenance and inspection.

b. Periods of excessive rainfall or of excessive waste liquid generation, resulting in storage of increased quantities of waste liquid prior to well injection.

c. Any mechanical or operating difficulties within the plant.

We hope the above information is complete for the application.
We thank you for your prompt attention to this application.

Sincerely yours,

CABOT CORPORATION

J. L. Hobbs
Division Manufacturing Manager

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